ANDHY WIJAYA. KAJIAN PENGARUH LIMBAH BATIK ALAM DI DESA WUKIRSARI KECAMATAN IMOGIRI KABUPATEN BANTUL TERHADAP VIABILITAS MIKROBA DALAM TANAH. Di bawah bimbingan Dr. Ir. Yanisworo Wijaya Ratih, M. Si dan Ir. AZ Purwono Budi Santosa, MP.

ABSTRAK

Penelitian ini bertujuan untuk mengkaji pengaruh limbah batik alam yang dihasilkan oleh industri batik di Desa Wukirsari Kecamatan Imogiri Kabupaten Bantul. Penelitian dilakukan di laboratorium menggunakan tanah yang diambil dari Desa Wukirsari, Kecamatan Imogiri, Kabupaten Bantul dengan jenis tanah Latosol. Tanah diatur kelembabannya sehingga mencapai 75% (*Water Holding Capacity*) menggunakan limbah dengan konsentrasi 0%, 25%, 50%, 75%, dan 100%. Pengamatan terhadap viabilitas bakteri total, bakteri penambat N, dan bakteri pelarut P dilakukan berdasarkan pertumbuhan dari masing-masing jasad tersebut. Jumlah bakteri ditentukan dengan metode taburan pada medium *Nutrient Agar* untuk bakteri total, *Jensen's* untuk bakteri penambat N, dan *Pikovskaya* untuk bakteri pelarut fosfat. Parameter diamati pada inkubasi ke 0, 10, dan 20 hari. Dilakukan pula pengamatan terhadap pH dan BO. Limbah hasil penelitian menunjukkan bahan limbah batik alam bersifat basis (pH 9,0) dan mempunyai kadar bahan organik tinggi (7,74%). Limbah batik alam berpengaruh positif terhadap viabilitas bakteri total dan bakteri penambat N, namun berpengaruh negatif terhadap viabilitas bakteri pelarut P.

Kata kunci : Limbah batik alam, viabilitas, mikroba

ANDHY WIJAYA. STUDY OF EFFECT BATIK NATURAL WASTE IN WUKIRSARI VILLAGE, IMOGIRI SUBDISTRICT, BANTUL REGENCY, ON THE SOIL MICROBES VIABILITY. Supervised by Dr. Ir. Yanisworo Wijaya Ratih, M. Si and Ir. AZ Purwono Budi Santosa, MP.

ABSTRACT

The aimed of the study is to determined the affect of natural batik waste in Wukirsari village, Imogiri subdistrict, Bantul regency on bacterial viability. The study was conducted in laboratory using Latosol soil were taken from Wukirsari, Bantul regency. The soil moistures were set on 75% (Water Holding Capacity) using 0%, 25%, 50%, 75%, and 100% of concentration of the waste. The parameter which were analyzed were viability of total bacteria, N fixed bacteria, phosphate solubilizing bacteria, pH, organic matter wasted. The number cells were analyzed using puor plate method on Nutrient Agar medium for total bacteria, Jensen's medium for N-fixed bacteria, and Pikovskaya medium for phosphate solubilizing bacteria. The parameters were observed on 0, 10, and 20 day incubation periode. The result show that salinity (pH) and concentration of organic matter of wasted were 9,0 and 7,14% respectively. The natural batik waste possitive affect on the viability of total bacteria and N-fixed bacteria and other hard negative affect on phosphate solubilizing bacteria.

Keywords : batik natural wasted, viability, bacteria